REMARKS

The foregoing Reply and these remarks are in response to the Office Action dated September 13, 2002. As this amendment is being filed after the three-month statutory period, this amendment is accompanied by a Request for an Extension of Time. In the Office Action, pending claims 21-36 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Fisher. In response to the Examiner's rejections, Applicants have amended claims 21 and 22 and have added new claims 37-50. An appropriate fee for the Request for Extension of Time and the additional claims is attached. Please charge any underpayments or credit any overpayments to Deposit Account number 50-0951.

Prior to addressing the rejection on the art, a brief description of the present invention is appropriate. Applicants have developed a method that can be used to create high strength composite panels that can withstand point compression loading without deformation. For example, the process can be especially useful for manufacturing a transom for a boat.

The inventive method includes the steps of positioning a first fabric layer spaced from a second fabric layer to form opposing panel surfaces. A foam core is fixed between at least a portion of the fabric layers to form the panel. Further, one or more rigid point compressive load bearing members are positioned between portions of the foam core along areas of anticipated point compression loading. Point compression loading refers to compression forces placed on a composite panel from components bolted or otherwise fastened to the panel such as outboard motors. Significantly, the point compressive load bearing members are *rigid* at the time they are positioned. For

example, the point compressive load bearing member can be an elongated channel formed of materials such as steel, aluminum or a metal alloy. The foam core can be injected between the first and second fabric layers to form the panel. In that case, the method can also include the step of causing the foam core to penetrate at least partially into interstices of the fabric layers to bind the foam core to the fabric layers. A foam core can also be injected into the rigid point compressive load bearing member.

Turning to the rejections on the art, claims 21-36 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Fisher. Fisher discloses a manufacturing process in which flexible reinforcing elements are placed between rigid inner and outer shells. The inner and outer shells are used to produce a boat hull, and the manufacturing process is designed to reinforce the boat hull against shear stresses. Both the inner and outer shells are constructed of rigid plastic. Initially, the outer shell is positioned in a female mold, and the inner shell is placed in a male mold. Significantly, the reinforcing elements "are of a flexible or yielding character" when they are positioned between the inner and outer shells. Specifically, Fisher describes the reinforcing elements as including a body, one or more layers of glass fiber mat wrapped around the body and a flexible binder to secure the glass fiber mat to the body. Notably, the body is constructed of flexible materials such as sponge plastic, an inflated bag (made of rubber, plastic or paper) or an elastic plastic.

In Fisher, the reinforcing elements are sprayed with a plastic solution compatible with the plastic of the shell on which the non-rigid reinforcing elements are to be placed. This step is to ensure that the reinforcing elements will bind to the surface of the plastic shell. The flexible reinforcing elements are then suitably spaced on the appropriate

shell, preferably the outer shell. The molds are then assembled with the flexible reinforcing elements occupying space between the shells. After the molds are assembled, foaming compound is introduced between the inner and outer shells, and this foaming compound and the reinforcing elements are permitted to cure together.

Because of their flexibility, the reinforcing elements in Fisher will be compressed as the molds are assembled. Fisher stresses the importance of placing flexible or yielding reinforcing elements between the inner and outer shells by noting that such a process eliminates the need to shape the reinforcing elements to an exact size before assembling the molds.

One important distinction between the inventive process and Fisher is the use of different materials when forming composite panels. Specifically, Fisher discloses the positioning of rigid plastic shells in molds when forming a composite panel. In contrast, amended independent claim 21 and new independent claims 37, 40 and 47 recite the step of positioning a first *fabric* layer spaced from a second *fabric* layer to form opposing panel or transom surfaces. The lack of a fabric layer on the inner and outer shells of Fisher is confirmed because Fisher explains that the reinforcing elements are "sprayed with a plastic solution compatible with the plastic of the shell so that when the sprayed body is applied, it will adhere in position to the shell . . ." That is, a plastic solution is preferably applied to the reinforcing elements to cause them to adhere to the plastic of the shell.

Another significant distinction between Fisher and the invention is that the point compressive load bearing members of Applicants' process are rigid at the time they are positioned between the first and second fabric layers. Amended independent claim 21

clarifies this particular feature of the invention, and new independent claims 37, 40 and 47 include this element. The reinforcing elements of Fisher, however, "are of a flexible or yielding character" when they are positioned between the inner and outer shells. Moreover, amended dependent claim 22 and new dependent claim 39 recite that the point compressive load bearing member is formed of a rigid or inflexible material selected from the group consisting of steel, aluminum or metal alloy. Additionally, new dependent claims 42 and 48 recite that the load bearing members are made of metal. These features are in direct contrast to the construction of the reinforcing elements that are positioned in the Fisher method.

Further, each of amended independent claim 21 and new independent claims 37, 40 and 47 recite that the load bearing members are positioned along areas of anticipated point compression loading. In addition, new claim 47 recites that the area of anticipated point compression loading is associated with an outboard motor bracket. Fisher, however, mentions nothing about positioning reinforcing elements in areas of anticipated point compression loading. In fact, Fisher teaches away from positioning loading members along areas of anticipated loading because the reinforcing elements of Fisher are designed to improve the ability of a boat hull to withstand shear and are poorly suited for supporting compressive loads. Notably, if the reinforcing elements of Fisher are subjected to point compression loading, they will deform under the sustained compression.

New independent claim 47 and new dependent claim 46 also include the step of causing the foam core injected between the first and second fabric layers to penetrate at least partially into interstices of the fabric layers to bind the foam core to the fabric

layers. When the foam compound is injected between the inner and outer rigid plastic shells of Fisher, however, it is impossible for the foam to penetrate any interstices of a fabric layer because, as noted earlier, no such fabric layer exists.

Finally, new independent claims 40 and 47 recite that the inventive process is for the manufacture of a transom for a boat. In contrast, the process described in Fisher is used to construct boat hulls. As noted above, Fisher does not describe or even suggest positioning reinforcing elements along areas of anticipated point compression loading. The transom of a boat, however, is the section of a boat that must support one or more point compressive loads such as those associated with an outboard motor.

Accordingly, the method of Fisher does not disclose or suggest the process of claim 21. Further, dependent claims 22-36 are believed to be patentable at least based on their dependence on amended base claim 21. It is also believed that Fisher does not disclose all the elements recited in new independent claims 37, 40 and 47. New dependent claims 38-39, 41-46 and 48-50 are also believed to be allowable at least based on their dependence on the new independent claims.

Applicants have made every effort to present claims which distinguish over the prior art, and it is believed that all claims are in condition for allowance. Nevertheless,

Applicants invite the Examiner to call the undersigned if it is believed that a telephonic interview would expedite the prosecution of the application to an allowance.

Respectfully submitted,

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MARKED-UP VERSION TO SHOW CLAIM AMENDMENTS

21. (Amended) A method of forming high strength panels suitable for use in applications requiring a capability to withstand point compression loading without deformation, comprising the steps of:

positioning a first fabric layer spaced from a second fabric layer to form opposing panel surfaces;

fixing a foam core between at least a portion of said fabric layers to form said panel;

positioning [securing] at least one rigid point compressive load bearing member between portions of said foam core along areas of anticipated point compression loading in a location to prevent compression of said foam core when a point compressive load is applied to said point compressive load bearing members.

22. (Amended) The method according to claim 21 further comprising the step of selecting [a material for] said point compressive load bearing member to be an elongated channel formed of a material selected from the group consisting of [composite material,] steel, aluminum and a metal alloy.